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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,491	02/11/2002	John Booth Bates	2001-0621	6019

7590 11/18/2004

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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,491	BATES ET AL.	
	Examiner	Art Unit	
	Leonard S Liang	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6, 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-11, and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

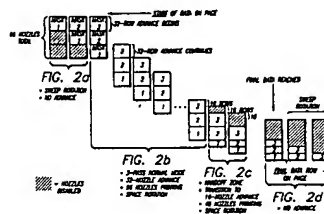
Claims 1-2, 7-11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cleveland (US Pat 5677716).

Cleveland discloses:

- {claim 1} A method of printing on a print medium with a printhead in an ink jet printer, the printer having a minimum distance the print medium must be moved in an advance direction to overcome advancement errors associated with equipment for advancing the medium, to thereby move the medium a reliable distance (column 1, lines 26-36; column 3, lines 10-42; column 13, line 66 – column 14, line 59; column 23, line 30 – column 24, line 13); advancing the print medium in an advance direction a predetermined amount during a first advancing step; printing on the print medium with the printhead in an area corresponding to the predetermined amount during a first printing step; determining an end of printable area on the print medium in the advance direction; advancing the print medium in the advance direction a fixed minimum reliable move amount during a second advancing step, dependent upon the determining step, the minimum

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reliable move amount being equal to the minimum distance and less than the predetermined amount (column 1, lines 26-36; column 3, lines 10-42; column 13, line 66 – column 14, line 59; column 23, line 30 – column 24, line 13); and printing on the print medium with the printhead in an area corresponding to the minimum reliable move amount during a second printing step (figure 2a-2d; column 3, lines 10-42; column 14, lines 52-59; column 23, lines 30-65; column 24, lines 1-13)



- {claim 2} the first printing step is carried out using multiple pass printing, the multiple being an integer p (column 17, lines 53-64)
- {claim 7} the predetermined amount corresponds to an integer divisor of a height of the printhead (column 23, lines 30-67; column 24, lines 1-12)
- {claim 8} the first printing step is carried out using multiple pass printing, the multiple being an integer p, and wherein the printing is carried out such that a distance d near the end of printable area subject to print degradation is represented by a mathematical expression: $d=(n-1)*m$ (figure 2a-2d; column 3, lines 10-42; column 14, lines 52-59; column 17, lines 53-67; column 18, lines 1-37; column 23, lines 30-65; column 24, lines 1-13; inherent)
- {claim 9} the second printing step is carried out using multiple pass printing, and including the steps of repeating the second advancing step and the second

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printing sep until a nozzle of the printhead closest to the end of printable area is immediately adjacent to the end of printable area, and then repeating the second printing step without repeating the second advancing step until the multiple passes on the printable area are complete (figure 2a-2d; column 3, lines 10-42; column 14, lines 52-59; column 17, lines 53-67; column 18, lines 1-37; column 23, lines 30-65; column 24, lines 1-13; inherent)

- {claim 10} A method of printing on a print medium with a printhead in an ink jet printer having a minimum distance the print medium must be moved in an advance direction to overcome advancement errors associated with equipment in the printer for advancing the medium, to thereby move the medium a reliable distance (column 1, lines 26-36; column 3, lines 10-42; column 13, line 66 – column 14, line 59; column 23, line 30 – column 24, line 13); printing on the print medium using multiple pass printing, including the repetitive substeps of: advancing the print medium in an advance direction a predetermined amount during a first advancing step; and printing on the print medium with the printhead in an area corresponding to the predetermined amount during a first printing step; determining an end of printable area on the print medium in the advance direction; and printing on the print medium using multiple pass printing, dependent upon the determination of the end of printable area, including the repetitive substeps of: advancing the print medium in the advance direction a fixed minimum reliable move amount during a second advancing step, the minimum reliable move amount being equal to the minimum distance and less

than the predetermined amount and sufficient to overcome advancement errors associated with operation of equipment for the advancing steps (column 1, lines 26-36; column 3, lines 10-42; column 13, line 66 – column 14, line 59; column 23, line 30 – column 24, line 13); and printing on the print medium with the printhead in an area corresponding to the minimum reliable move amount during a second printing step (figure 2a-2d; column 3, lines 10-42; column 14, lines 52-59; column 23, lines 30-65; column 24, lines 1-13)

- {claim 11} the multiple pass printing of the first printing step is carried out with a multiple represented by an integer p (column 17, lines 53-64)
- {claim 14} the second printing step using adjusted multiple pass printing includes the substeps of repeating the second advancing step and the second printing step until a nozzle of the printhead closest to the end of printable area is immediately adjacent to the end of printable area, and then repeating the second printing step without repeating the second advancing step until the multiple passes on the printable area are complete

Allowable Subject Matter

Claims 3-6 and 12-13 are allowed. The reasons for allowance were highlighted in the previous action.

Response to Arguments

Applicant's arguments filed 08/31/04 have been fully considered but they are not persuasive.

Before the examiner responds to the applicant's arguments, the examiner would like to draw the applicant's attention to some claim interpretation rules that the examiner is required to adhere by. According to MPEP 211, "Claims must be given their **broadest reasonable** interpretation **consistent** with the supporting description". (*In re Hyatt*, 211 F.3d 1367, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000)). Furthermore, MPEP 2111 states "A claim must be interpreted in light of the specification **without** reading limitations into the claim."

As the examiner has indicated in previous responses, the differences between the Applicant's specified invention and Cleveland are noted and appreciated. However, the examiner believes that the applicant is improperly trying to narrow the scope of the claimed invention. The examiner has already indicated allowable subject matter in previous actions.

With regards to the applicant's arguments, the applicant has argued that "Cleveland's teaching for the end-of-page print defect problem is simply to advance the sheet by only half the normal advance distance as the page end is reached..." The applicant does not interpret advancing the sheet by half the normal advance distance as advancing the medium a minimum reliable distance in order to overcome advancement errors. This is where the examiner and the applicant disagree. The examiner, broadly interprets advancing the sheet half the normal distance as a minimum reliable advance distance. Note that Cleveland does not disclose advancing the sheet half the normal advance distance on a whim. Cleveland specifically discloses this half-distance advancement for the purpose and solution of overcoming end of page advancement errors. If the sheet were not advanced this half distance, errors would occur in the

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process of end of page printing. Thus, in light of the broad limitations of the claimed invention, the examiner stands by the belief that Cleveland does indeed read on the claimed invention.

Please also note that in terms of defining a fixed reliable distance, the applicant has not **explicitly** defined what is meant by a minimum reliable move amount. Specifically, no concrete numbers are measurements have been given. The applicant's specification implicitly exemplified the minimum reliable move amount, but this is not enough. Exemplification is **not** an explicit definition. Furthermore, the examiner believes that the applicant is improperly comparing Cleveland to the specified invention. The examiner admits that the move amount in Cleveland is not as small as the move amount disclosed in the applicant's specified invention. However, the examiner cannot read limitations into the claimed invention. For the purposes of Cleveland and in the context of Cleveland, as it stands by itself, the half-distance advancement amount is equal to the minimum distance (no smaller advance distance is disclosed), and it is also less than the predetermined amount (i.e. half), as described in the claimed invention. The distance is "minimum" for the standards of Cleveland, though it might not be minimum by the applicants' standards. But that's okay, since the applicant's standards of "minimum" were never claimed in concrete terms.

Another argument that the applicant makes is that "Cleveland would vary the advance at the end of the page depending upon the print mode and the type of medium being printed. In contrast, the present invention uses a fixed distance, the minimum reliable move amount which is determined by the physical capabilities of the machine, not by the print mode being practiced." Here, the examiner believes that the applicant is improperly narrowing the concept of "fixed". Cleveland clearly discloses a fixed minimum advancement distance (i.e. one half). That is a

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fixed value and rate. Though the advancement distance does depend at the start on the print mode, regardless, the minimum advance distance is “fixed” based on that. Though Cleveland does not disclose a fixed value in terms of measurements, such as the sheet is advanced exactly 2 cm, etc..., the applicant’s invention does not either. As the applicant discloses, “the minimum reliable move amount which is determined by the physical capabilities of the machine.” Thus the applicant is simply defining “fixed” in reference to physical capabilities of the machine (which will vary from machine to machine), just as Cleveland defines fixed in reference to print mode.

This response is considered to address all the issues in the applicant’s argument.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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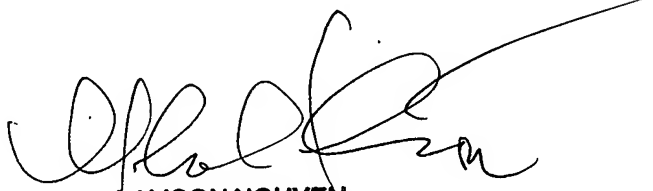
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LAMSON NGUYEN
PRIMARY EXAMINER
11/14/04